Curriculum Vitae Richard Kuhlmann

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EDUCATION

ETH Zürich Sep 2024–June 2026
Master of Science ETH in Robotics, Systems and Controls
- Relevant Coursework: Robot Dynamics, Machine Perception, Perception and Learning for Robotics, Real World Robotics - A Hands-on Project Class, Dynamic Programming and Optimal Control

RWTH Aachen University Oct 2020–June 2024
Bachelor of Science in Mechanical Engineering
- Graduated among best 2.5% of students
- Bachelor thesis: *Development of a simulation environment for improving controllability of a spherical robot*

TECHNICAL SKILLS & LANGUAGES

Languages and Frameworks: Pyton, Java, ROS, Matlab & Simulink
Developer Tools: Git, Docker, Visual Studio Code, Slurm
Mechanical Design: CAD (multiple programs), Production and Assembly, 3D Printing, Silicone Casting
Languages: English (Business fluent), German (Native)

RELEVANT WORK EXPERIENCE AND ACADEMIC PROJECTS

Semester Project: Adversarial RL for humanoid locomotion on rough terrain Sep 2025 – today
Robotic Systems Lab, ETH Zürich
- Implementation of a training environment in IsaacLab
- Training policies with terrain aware reference motions for robust terrain traversal

Working Student - Mechanical Engineer Feb 2025 – today
mimic robotics
- Mechanical design of anthropomorphic robotic hands
- Design and evaluation of test benches for mechanical components
- Component sourcing and design of efficient assembly processes

Real World Robotics - A Hands-on Project Class Sept 2024 – Dec 2024
Soft Robotics Lab, ETH Zürich
- Mechanical design and production of a 16 DOF robotic hand with tactile sensing and controllable wrist
- Application of Imitation Learning for autonomous color sorting

PUBLICATIONS

Sight Over Site: Perception-Aware Reinforcement Learning for Efficient Robotic Inspection
https://arxiv.org/abs/2509.17877#
- Development of a novel Reinforcement Learning pipeline for efficient robotic inspection
- Design and Training of CNN and MLP based extractor and policy architectures
- Integration with Habitat Simulator and Gymasium for training

SCHOLARSHIPS AND AWARDS

Scholarship of the German National Academic Foundation 2020 - present
Awarded for academic performance and social engagement based on an assessment center

EXTRACURRICULAR ACTIVITIES

Youth Leader 2016 - present
ejs Schlebusch, Leverkusen
- Organization and realization of eight holiday camps in Switzerland, Germany, Norway and Sweden
- Duration: up to 2.5 weeks, participants: up to 60

Member of LAUNCH 2025 - present
ETH Entrepreneurs Club
- Organization of Zürich's biggest Start-Up Conference